

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 119471/JMD/jet	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/AU2004/000973	International filing date (day/month/year) 20 July 2004	(Earliest) Priority Date (day/month/year) 21 July 2003
Applicant NAUTITECH PTY LTD et al		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 5 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box No. II).

3. ☒ Unity of invention is lacking (See Box No. III).

4. With regard to the title,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the abstract,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 3



as suggested by the applicant.



as selected by this Authority, because the applicant failed to suggest a figure.



as selected by this Authority, because this figure better characterizes the invention.



b. none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2004/000973

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Claims 1-7, 9-15 are directed to a transmission having two gear trains and a clutch means.

Claim 8 is directed to a transmission having a lay shaft, two gear trains and two clutches.

The common feature of a transmission having two gear trains is common in the art, hence a lack of unity exists.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000973

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. ⁷: B63H 23/30, 23/06, F16H 3/091, 3/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

DWPI: IPC: B63H 23/- with keywords: clutch, coupling and gear.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 596307 A (GRYLLS) 1 January 1948 Whole document	1, 3-6, 8-10, 14-15
X	GB 2367598 A (COMBINED ENGINEERING CONCEPTS LTD) 10 April 2002 Whole document	1, 3, 5-6, 8-15
X	US 4323354 A (BLANCHARD) 6 April 1982 Whole document	1-4, 6, 8-10, 14-15
X	US 4331432 A (BLANCHARD) 25 May 1982 Whole document	1, 3-4, 6, 8- 10, 14-15

☒ Further documents are listed in the continuation of Box C☒ See patent family annex

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"B" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
9 September 2004

Date of mailing of the international search report 13 SEP 2004

Name and mailing address of the ISA/AU

AUSTRALIAN PATENT OFFICE
PO BOX 200, WODEN ACT 2606, AUSTRALIA
E-mail address: pct@ipaustalia.gov.au
Facsimile No. (02) 6285 3929

Authorized officer

KURT TOBLER

Telephone No : (02) 6283 2469

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000973

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4400163 A (BLANCHARD) 23 August 1983 Whole document	1, 3-4, 8-10, 14-15
Y	Whole document	2, 5, 11-13
X	US 1795135 A (MOLLY) 3 March 1932 Whole document	1, 3-4, 8-10, 14-15
X	US 4747795 A (KAWAMURA et al.) 31 May 1988 Whole document	1, 6, 8-11, 14-15
X	EP 688974 B1 (TOYOTA JIDOSHA KABUSHIKI KAISHA) 9 September 1998 Whole document	1-2, 4-6, 11-13
X	AU 661697 B (199219415) (YANG) 13 January 1994 Whole document	1-2, 4, 6, 11
X	GB 1241744 A (STEYR-DAIMLER-PUCH AG) 4 August 1971 Whole document	8-11
Y	US 5085302 A (KRIESEL) 4 February 1992 Whole document	1-2, 5, 7, 11-15
A	GB 2205366 A (RICARDO CONSULTING ENGINEERS PLC) 7 December 1988 Whole document	7

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2004/000973

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
GB	596307				
GB	2367598	AU	92066/01	EP	1328459
		WO	0228756	US	2004033737
US	4323354	CA	1139968	CA	1177338
		JP	58085794	JP	55110695
				US	4400163
US	4331432	CA	1142393	JP	56083640
		CA	1177338	CA	1139968
		US	4323354	JP	58085794
				US	4400163
US	1795135				
EP	0688974	JP	8004887	US	5603241
AU	661697	AU	19415/92	CA	2073158
GB	1241744				
US	5085302	EP	0515650	WO	9211472
GB	2205366	JP	1046052		
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.					
END OF ANNEX					